

**BIMETALLIC PLATE-FIN TITANIUM BASED HEAT EXCHANGER**

**ABSTRACT OF THE DISCLOSURE**

5           A heat exchanger of the plate-fin type has fins of one metal brazed to a  
plate made of a different metal for use in oil coolers, condensers, evaporators,  
and the like. The distortion-prone titanium fins of conventional heat exchangers  
may be replaced with another metal, such as a stainless steel or a nickel based  
10           alloy to provide a structure that is resistant to crushing at the brazing  
temperature. Fluid or air flow resistance (pressure drop) through the heat  
exchanger may also be improved if the selected fin metal forms better fin  
shapes and has fewer burrs than conventional titanium fins. The replacement  
material may also improve the heat transfer performance of the heat exchanger  
if the selected fin metal has higher thermal conductivity than titanium.